

EFFECT OF PRIVATE SECTOR INVOLVEMENT IN PUBLIC PRIVATE PARTNERSHIP PERFORMANCE IN HOUSING CONSTRUCTION PROJECTS IN THE CITY OF KIGALI.

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ABSTRACT

The research intended to determine the effect of Private Sector involvement in public private partnership performance in housing construction projects in the city of Kigali. A case study focused on involvement of Private in implementing PPPs performance in housing construction projects. The study covered three districts in City of Kigali Kicukiro, Gasabo and Nyarugenge. PPPs in housing construction projects have been identified as one of the lasting solutions and this research intended to find out the role of PPPs in performance of housing construction projects. The aim of the study was to determine the effect of Private Sector involvement in public private partnership performance in housing construction projects in the city of Kigali. To achieve this the study determined how technical skills of private sector involvement influences the quality of housing construction projects, established financial contribution of Private sector on performance of housing construction projects, identified risks and their mitigation measures in implementing Public Private Partnerships of housing construction projects. The study adopted a descriptive research design. Stratified random sampling was used to determine the sample size whereby purposive sampling technique was used to select the respondents. A sample of 150 respondents was given the questionnaires for data collection. Data collected was analyzed through SPSS version 21.

The study revealed that there was a strong positive and significant relationship between Technical skills, financial contribution, Risk mitigation, and performance of housing projects (.701**, $p<0.001$) (.686** $p<0.001$), (.736** $p<0.001$). The study recommends that the government should put in place measures and policies that would attract housing companies to invest in Rwanda so that the current gap that is existing in housing sector as a result of rapid growth of population more so within the city may be addressed.

Key words: Public-Private Partnerships, Employee's Training and effectiveness of risk management

1. Introduction

Construction projects are typically financially expensive, that governments both in developed and developing countries, for pragmatic reasons are now adopting public-private partnership to fund public sector projects. The forms of public-private partnerships (PPPs) and the use in many countries and industries are increasing as part of the policies towards decentralization and deregulation,(Akintoye,*et. al* 2003). Public sector often lacks expertise and knowledge to implement Public-Private Partnerships successfully. To manage Public-Private-Partnerships efficiently, government officials need guidance on how to apply Public-Private-Partnerships in different sectors of the society to ensure optimum service delivery to its citizenry. This is so because private sector is usually well aware what Public-Private-Partnership is about while engaging in these special arrangements with governments (Savas, 2000). The lack of awareness about the Public-Private-Partnership tool in the public sector has been addressed around the world in key international institutions such as World Bank, European Union and United Nations with the aim of finding a workable solution for the challenges facing the governments' provision of services to its citizenry. Many governments have received training, education and advocacy services from international institutions. A partnership is a voluntary collaborative agreement between two or more parties in which all the parties involved agree to work together to achieve a common objective (Ikejiofor, 1998).

Rapid growth in demand for infrastructure has been a common theme in recent decades in developing countries. It is a recognized fact that many governments are short of financial resources, technological and efficient management skills in their infrastructure and other construction project developments (Roth, 1987). They are now seeking the international company, private sector and other non-profit organizations to help finance their projects and achieve technology transfer. The developed countries' governments, for the purposes of delivering higher quality and more cost-effective public services are encouraging private sector involvement in the provision of financing and management of public sector infrastructure through PPP (HM, 1995). There is no single definition of the term "public private partnership". The term should be viewed as a spectrum of possible relationships between public and private actors for the co-operative provision of traditionally public-domain services. Gentry and Fernandez (1997) described Construction Public-Private Partnerships as private participation in the design, financing, construction, ownership, and operation of a public purpose facility or service. These arrangements vary from contracting out, mixed-capital public private joint ventures, Build-Operate-Transfer (BOT), lease- develop-operate, and full privatization.

The Government of Rwanda (GoR) views Public Private Partnerships (PPPs) as an essential tool for promoting the development of quality infrastructure assets and related services in the public domain. Accordingly, in early 2008, GoR set out its commitment to PPPs as a procurement option in the National Public Investment Policy (NPIP). The Policy highlighted the role to be played by PPPs as a catalyst for private sector development. However, GoR recognizes that PPPs can only play such a role if they offer genuine value for money and improved services for the public sector. GoR has therefore set up two entities within the Ministry of Finance and Economic Planning, a Public Investment Technical Team (PITT) and a PPP unit, to provide overall strategic, managerial, and regulatory guidance at various stages in the PPP process, to serve as custodians of the PPP process, and to provide technical advice and assistance to Government of Rwanda (ACET 2014). Besides all the efforts the private sector has not been very much responsive to the call and thus the PPP initiative is not producing results as expected.

2. Statement of the problem

Despite the absence of any coordinated policy regarding private sector involvement in most of the developing countries, private involvement in the provision of infrastructure has increased rapidly in recent years. However, there has been little systematic discussion of the issues associated with private involvement in infrastructure, and little information is available on whether the involvement has any significant effect on performance of construction projects (Grossman *et al.*, 2003)

Rwanda is one of the countries that have faced lack of housing facilities for accommodation, industrialization, commercial and other economic productive activities.

The problem of housing is not only to Rwanda. However, Rwanda has a special housing need that has to be addressed. To be specific, according to the report on housing market demand, housing finance, and Housing preferences for the City of Kigali by planet consortium 2012, Kigali is expected to double its population by 2022 due in part to migration from the countryside but also due to the city's position as the pre-eminent urban center of Rwanda, which will influence the volume of rural to urban migration to Kigali, compared to other urban locations in the country.

Backlog demand in Kigali 2012 was estimated at 108,807 Dwelling Units, equivalent to almost one half of the existing housing stock. Accordingly, with the present calculation, total demand for new dwellings in Kigali from 2012 to 2022 will reach 344,068 DU, which is equivalent to an average of 31,279 DU per year which is not matched with corresponding supply. In attempt to solve this problem, the government of Rwanda through the ministry of Infrastructure and Rwanda Housing Authority and other government agencies has come with number of initiatives of providing subsidized housing facilities through commercial banks where incentives like tax holidays, mortgage loans and housing loans and tax exemption on construction materials especially for big construction projects. However, this has led to private sector to provide most expensive housing facilities. In attempt to solve this, Public private partnership has been sought of but they have not provided the best solution. It's against this back ground that the researcher was prompted to find out what is the role of private sector involvement in public private partnership performance in housing construction projects in the city of Kigali.

3. Specific Objectives

The study had the following objectives

- i. To determine the effect of technical skills on performance of housing construction projects.
- ii. To establish the role of financial contribution of private sector on performance of housing construction projects
- iii. To determine the role of private sector in risks mitigation in implementing PPPs of housing construction projects.

4. Literature Review

A public-private partnership (PPP) is a government service or private business venture which is funded and operated through a partnership of government and one or more private sector companies. Public-Private-Partnerships have become more widespread to all public jurisdiction sizes, as the word of the successes of these partnerships grows. Some of the Public-Private- Partnership arrangements are; design build operate transfer, build operate transfer and concessions. However, literature clearly agrees that Public-Private-Partnerships appear to have no clear definition or standard implementation methods.

4.1 Theoretical framework

The present study was guided by Stakeholder theory (Freeman, 1994), McKinsey 7-S framework and Chandler's (1962) strategy and structure propositions.

4.1.1 Stakeholder Theory

Stakeholder theory begins with the assumption that values are necessarily and explicitly a part of doing business. It asks managers to articulate the shared sense of the value they create, and what brings its core stakeholders together. It also pushes managers to be clear about how they want to do business, specifically what kinds of relationships they want and need to create with their stakeholders to deliver on their purpose. Stakeholder theory is managerial in that it reflects and directs how managers operate rather than primarily addressing management theorists and economists. The focus of stakeholder theory is articulated in two core questions (Freeman 1994). First, it asks, what is the purpose of the firm? This encourages managers to articulate the shared sense of the value they create, and what brings its core stakeholders together.

This propels the firm forward and allows it to generate outstanding performance, determined both in terms of its purpose and marketplace financial metrics. Second, stakeholder theory asks, what responsibility does management have to stakeholders?

This pushes managers to articulate how they want to do business—specifically, what kinds of relationships they want and need to create with their stakeholders to deliver on their purpose. Today's economic realities underscore the fundamental reality we suggest is at the core of stakeholder theory: Economic value is created by people who voluntarily come together and cooperate to improve everyone's circumstance.

Managers must develop relationships, inspire their stakeholders, and create communities where everyone strives to give their best to deliver the value the firm promises. Certainly shareholders are an important constituent and profits are a critical feature of this activity, but concern for profits is the result rather than the driver in the process of value creation (Collins, 2001).

4.1.2 McKinsey 7-S Framework

The 7-S framework of McKinsey is a Value Based Management (VBM) model that describes how one can holistically and effectively organize a company. Together these factors determine the way in which a corporation operates. The interconnecting centre of McKinsey's model is: Shared Values, which underscore an organization's central beliefs and attitudes. McKinsey summarizes these into seven key areas named the Ss, which include: *Strategy*: Plans for the allocation of a firm's scarce resources, over time, to reach identified goals. Environment, competition, customers; *structure*: the way the organization's units relate to each other: centralized, functional divisions (top-down); decentralized (the trend in larger organizations); matrix, network, holding, among others; *system*: the procedures, processes and routines that characterize how important work is to be done: *financial systems*; hiring, promotion and performance appraisal systems; information systems; *staff*: numbers and types of personnel within the organization; *style*: cultural style of the organization and how key managers behave in achieving the organization's goals; and *skill*: distinctive capabilities of personnel or of the organization as a whole (McKinsey, 2001).

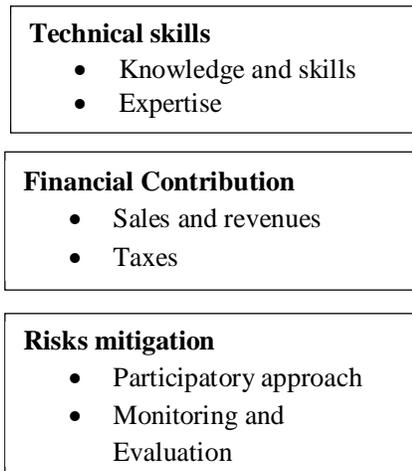
The framework exhibits key strengths that are pertinent to the present study: a diagnostic tool for understanding organizations that are ineffective; guides organizational change; combines rational and hard elements with emotional and soft elements; managers must act on all Ss in parallel and all Ss are interrelated (Rapert et al., 2007)

The nature of the relationship is usually long term several academic researchers and industrial professionals from many countries have identified some of the success factors for PPPs. In Canada, the key successful requirements identified by Tony (1996) were shared authority and responsibility, joint investment, shared liability or risk-taking, and mutual benefit to the partners. Stone house et al (1996) undertook a study based on a hospital PPP, agreed that successful PPPs require commitment, mutual understanding and a high degree of enthusiasm. In R&D, successful PPPs have six characteristics in common: a clear business agenda, strong partners committed to change, investment by both parties, rootedness in the user community, links to other organizations, and a commitment to sustain and replicate the results (Kanter, 1999).

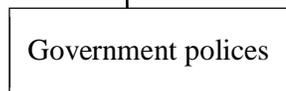
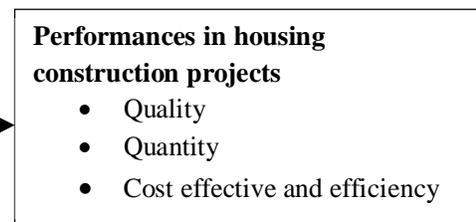
5. Conceptual Framework

The conceptual framework that is developed for this study is shown below in Figure 2.1. Furthermore, review of relevant empirical literature helped to understand how the variables (Independent, Dependent and Moderating) impact on the PPP development.

Independent variables



Dependent variables



5.1 Financial Contribution for PPP

In the financial leverage hypothesis, Kopp (1997) posits that Public-Private-Partnerships can enable the public sector to leverage more financial resources by using the private sector as an intermediary. Accordingly, the propensity for a government to use Public-Private-Partnerships to finance infrastructure is a function of the fiscal constraints such a government faces. According to this argument, Public-Private-Partnerships allow the public sector to consider the implementation of the otherwise unaffordable infrastructure projects. Imperatively, countries facing fiscal problems coupled with deficient external sources of revenue tend to be more open to foreign private investment including in the infrastructure sector. Such countries are more open to the use of Public-Private-Partnerships in infrastructure (Kopp, 1997).

The financial package is one of the two main components of a PPP proposal that are rigorously assessed, and normally consists of the financial and commercial aspects of the project. The financial elements would include the sources of funding, interest rate, capital structure, repayment and draw down schedules, currency of loans and payments.

5.2 Risks Mitigations for PPP

Project risk across the infrastructure life cycle Proper front-end project planning is all about shaping the project's risk profile so it can be managed during execution, and execution is all about aggressively mitigating the risks that emerge. The key is to know what risks are inherent to a project and what degree of freedom you have to shape the risk profile before you commit the bulk of your funds; you must also have skills in place to prevent the remaining risks from getting out of control. Then you can discuss what skills and processes are needed during front-end planning versus execution. In practice, they are quite different.

There is an inherent conflict between the aspiration to limit the number and volatility of potential future (interface) risks and the need to maintain flexibility to respond to unforeseen changes over the life cycle of a project. The fact that risks can materialize in later stages, but have actually been caused in earlier stages under different responsibilities, requires an end-to-end risk-management view, as opposed to a siloed, individualized process-step responsibility. There is a clear need for strong risk-management processes from the outset and for these to be applied and continuously developed throughout the life of the project.

A state-of-the-art risk-management approach for infrastructure projects needs to reflect the peculiarities of the business. A good starting point is to undertake a forward-looking, life cycle oriented risk assessment and to generate insights into the root causes of identified and potential risks at the beginning of the project in the project-origination and design phase. A true understanding of stakeholders' capabilities and willingness to take on and actively manage certain risks the risk-ownership structure and the respective allocation and pricing of these risks would be a logical next step. In addition, strategy and risk-related processes need to be strengthened, and the governance and organization as well as the risk cultures of all stakeholders need to be enhanced.

The involvement of risk-taking private-financing perspectives early on, for example, as applied in a PPP, can ensure a more professional and disciplined approach to strategy, risk and project management, and deal structuring.

5.3 Technical Aspect in PPP

PPP presupposes that freedom of design is given to the private partner so that the innovation and the optimization can be stimulated and that the life cycle approach can be carried out. However, such freedom must not jeopardize the project's objectives. It is in the search for this balance that lies the greatest difficulty in defining the contractual framework of technical requirements. Campos et al., (2008).

Public-private-partnerships provide technical skills that resulted into the quality services and infrastructure on a very cost-effective basis. Yet there is concern by some that such arrangements compromise the social good of a public sector endeavor, or serve more to better the image of a private sector partners than further a wider purpose (Akintoye et al., 2003). The involvement of the private sector allows public entities to respond to market forces and become more competitive. This explanation is rooted in the belief that government interventions in the operations of public entities to bail them out during potential failure, introduces inefficiencies in their operations. The knowledge by a public entity that it would not be allowed to fail worsens the moral hazard among public entities. The need to avoid this hazard and improve efficiency in infrastructure provision necessitates the use of Public-Private-Partnerships. The underlying rationale for Public-Private-Partnerships is that they may offer value-for-money. According to the, US National Treasury (2002) amended regulations, 'value-for-money' means that the use of an institution, or of state property by a private party, in terms of the Public-Private-Partnership agreement, results in 'a net benefit' to the institution in terms of cost, price, quality, quantity, risk transfer, or a combination thereof. The forms that value-for-money can take include: lower construction costs; lower operating costs, and greater efficiency gains. Public-Private-Partnerships often involve a private sector partner, providing a 'bundle' of services, such as the design and construction of a road. Bundling differs from traditional contracting out of services, whereby separate contracts are drawn up to provide value-for-money that cannot be obtained by contracting out services separately. The integration of design, operation and maintenance over the life of an asset, within a single-project finance package, improves performance and reduces whole-of-life costs (OECD, 2000).

According to the value for money postulation of Sappington and Stiglitz (1999), Public-Private-Partnerships are desirable in infrastructure financing because they promote technical and allocate efficiency among public projects. Reeves (2004) argue that Public-Private-Partnerships might help derive value for money so long as they are established in an environment rooted in long term cooperative relations among stakeholders. This co-operation should incorporate risk sharing and proper delineation of authority, communication and information channels as well as responsibility and accountability.

6. Research Methodology

6.1. Research Design.

This study adopted descriptive research design. A descriptive study is a study concerned with describing the characteristics of a particular individual or of a group (Kothari, 2004). The study sought to establish the role of private sector involvement in public private partnership performances in housing construction projects in the city of Kigali. It adopted a case study survey. A case study involves careful and complete observation and analysis of a unit in its relationship to any other unit in the group (Kothari, 2004). A survey design is associated with a guided and quick collection, analysis and interpretation of observation (Mugenda and Mugenda, 1999).

6.2. Target Population

The study was carried out in City of Kigali in the districts of Gasabo, Nyarugenge and Kicukiro with a population of 300 people drawn from different institutions that is officials and staff responsible for construction project, from the city of Kigali, Rwanda Housing Authority, Ministry of Infrastructures, Rwanda Development Board, Private sector Federation, Registered Engineers, Registered Architects, Real Estate developers, Gasabodistrict, Kicukiro district, Nyarugenge district and Rwanda Social Security Board was selected because they are directly deal with housing and construction matters.

6.3. Sample Size and sampling procedure

A sample size of 150 respondents was determined from a total population of 300 individuals using the formula by Yamane (1967). Stratified random sampling technique was used to select the employees while purposive sampling technique was used to select the end users. Stratified random sampling techniques ensure that different groups of a population are adequately represented in the sample. Stratified sampling divides the population into homogeneous groups such that the elements within each group are more alike than the elements in the population as a whole (Nachimas and Nachimas 2008).

$$n = \frac{N}{1 + N(e)^2}$$

Where n = the desired sample size

e= probability of error (i.e., the desired precision, e.g., 0.05 for 95% confidence level)

N=the estimate of the population size.

$$n = \frac{300}{1 + 300(0.05)^2} = 150 \text{ respondents}$$

6.4. Data collection instrument

Primary data was collected regarding the role of private sector involvement in public private partnership performances in housing construction projects in the city of Kigali. The respondents for this study were selected from different institutions as stipulated in the target population. Data was collected using structured questionnaires which were self-administered. Questionnaires were preferred because of the simplicity in their administration and low cost associated.

6.5. Pilot testing of the instrument

A preliminary test was done on the data collection tools and procedures to identify likely problems. This test was conducted at City of Kigali, where twenty questionnaires were administered to the employees in the respective departments. The filled questionnaires were later checked for consistency.

6.6. Validity of the instrument

Validity determines whether the research items truly measure what they are intended to measure or how factual the research results are (Golafshani, 2003). To test content validity (extent to which the sample was

representative of the population), experts opinion was sought. The research questions in the questionnaire were developed to represent each variable in the research. The data collected from the pilot study was subjected to factor analysis to test construct validity.

6.7. Reliability of instrument

Reliability is the extent to which results of a study were consistent over time and there is an accurate representation of the total population under study (Golafshani, 2003). Reliability analysis aims at finding out the extent to which a measurement procedure will produce the same result if the process is repeated over and over again under the same conditions (Tokeetal., 2012). Cronbach alpha coefficient was computed using SPSS to generate the value indicated in table 3.1 below. The Cronbach alpha coefficient value was compared with the threshold of 0.7 to ensure there is reliability. Cronbach's coefficient value above 0.6 show that the measurement procedure is reliable (Toke et al., 2012).

6.8. Data analysis and presentation

Quantitative data was entered into appropriate analysis programme, preferably statistical package for social sciences (SPSS) from which analysis were done using proportions (percentages), rates and descriptive statistics was used to estimate the mean and standard deviations of certain variables to ascertain how close or wider the sample statistics were spread from the mean. Quantitative data was presented in tables, charts, graphs and narratives.

Qualitative data was entered into a compilation sheet from which themes and sub themes were identified. Each theme was transferred into a master sheet from which final analysis was done in relation with the objectives of this study. Qualitative data was presented in form of narratives with verbatim reporting so that some strong feelings respondents can be reported as they were.

7. Research Findings and Discussions

7.1. Gender distribution among the respondents

Figure 4.1 shows that 97% of the respondents were male while female were 1%.

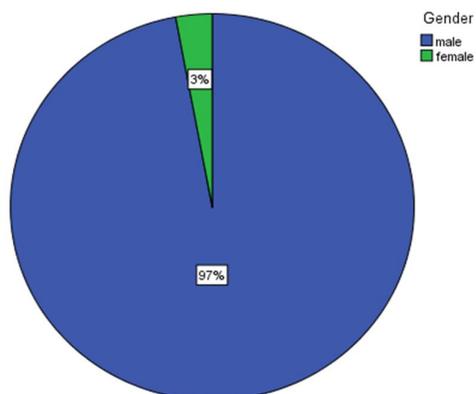


Figure 6: Gender distribution

7.2. Age distribution among the respondents

Figure 4.2 indicate that majority of the respondents (70%) aged between 21-35 years. A fair percentage of the study participants (27%) aged between 35-45 years, 3% aged above 45 years.

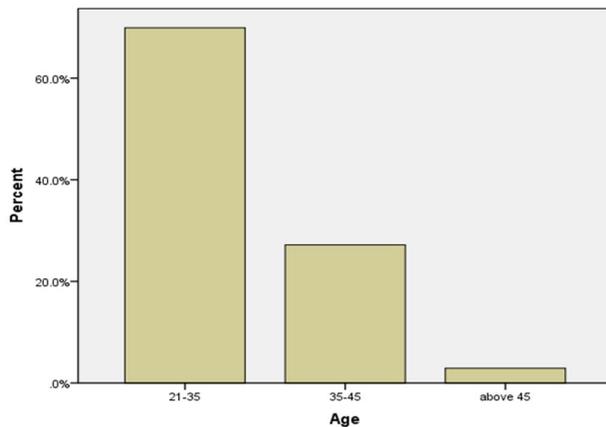


Figure 7: Age Distribution

7.3. Distribution of respondents Level of Education

Figure 4.3 indicate that 90% of the respondents had attained university education. Few respondents (8%) had secondary level education while 2% had no education at all.

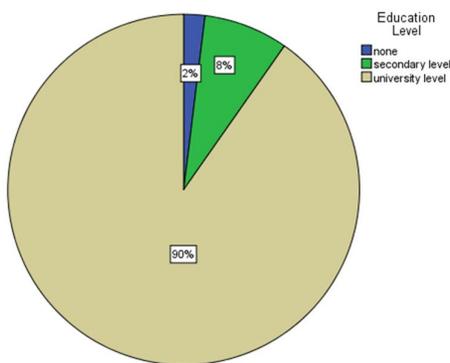


Figure 4: Education level

7.4. Effect of Technical skills on performance of housing construction projects

Table 1: Effect of Technical skills on performance of housing construction

Statement	Yes %	No %
Do you have any knowledge on PPPs and housing projects?	82	18
Do you find private sector technical skills highly required in having quality housing projects?	79	21
Do you think that technical skills are necessary for better performance of housing projects	82	18
The personnel in the housing construction projects has the necessary skill	79	21
Technical skills affect the performance of housing projects	95	5
Development of technical skills is necessary for better performance of housing projects	89	11

Table 1 indicates that 82% of the respondents felt that they had knowledge on PPPs and housing projects while 18% felt otherwise. Majority (79%) of the respondents stated that they found private sector technical skills highly required in having quality housing projects unlike 21% of the respondents. Majority (82%) of study participants thought that technical skills are necessary for better performance of housing projects unlike 18% who felt otherwise. Majority of the respondents (79%) felt that personnel in the housing construction projects have the necessary skill while 21% felt otherwise. Table 1 further indicates that 95% of the respondents stated that technical skills affect the performance of housing projects while 5% indicated it would not. Most of the study respondents (89%) stated that development of technical skills is necessary for better performance of housing projects against 11%.

Table 2 Correlation between Technical skills and quality of housing construction projects

	Housing projects performance	Technical skills
Housing projects performance	Pearson Correlation	1
	Sig. (2-tailed)	
	N	103
Technical skills	Pearson Correlation	.701 **
	Sig. (2-tailed)	.000
	N	103

** . Correlation is significant at the 0.01 level (2-tailed).

Table 2 indicates that there was a positive and significant relationship between Technical skills and housing projects performance (.701 **, $p < 0.001$). This implies that increase the technical skills of the employees within PPPs would improve the performance of housing construction projects.

7.5. Effect of financial contribution on performance of housing projects

Table 3: Effect of financial contribution on performance of housing projects

Table 3 indicates that 48% of the study population strongly agreed with the statement that Rwanda has a very big gap in housing projects responding to housing demand for residential, commercial and office space, 51% just agree while 1% disagreed with the statement. Further, 49% of the study participants strongly agreed that one of the solutions to the housing gaps in the City of Kigali is implementation of PPPs in housing projects, 47% just agreed while 4% disagreed with the statement. While 39% of the respondents strongly agreed that Quantity of housing projects would be increased through the adoption of PPP approach, 61% just agreed with the statement. Majority of the respondents just agreed with the statement that Quality of housing projects would be greatly enhanced if PPP strategy is perused, 48% strongly agreed while 2% disagreed with the statement

Table 4 Correlation between financial contribution and performance of housing projects

Statement	Strongly agree %	Agree %	Disagree %
Rwanda has a very big gap in housing projects responding to housing demand for residential, commercial and office space	48	51	1
One of the solutions to the housing gaps in the City of Kigali is implementation of PPPs in housing projects	49	47	4
Quantity of housing projects would be increased through the adoption of PPP approach	39	61	
Quality of housing projects would be greatly enhanced through PPP strategy	48	50	2

		Housing projects performance	Financial contribution
Housing projects performance	Pearson Correlation	1	
	Sig. (2-tailed)		
	N	103	
Financial contribution	Pearson Correlation	.686**	1
	Sig. (2-tailed)	.000	
	N	103	103

** . Correlation is significant at the 0.01 level (2-tailed).

Table 4 indicates that there is a significant relationship between housing projects performance and financial contribution ($R=.686$, $P<0.01$). This indicates that availing the housing construction projects with adequate finances would lead to improved performance of the projects.

7.6. Effect of risk mitigation on performance of housing projects

Table 5 Effect of risk mitigation on performance of housing projects

Statement	Yes %	No %
Do you believe that there are risks in implementing PPPs of housings construction projects	67	33
Does risk mitigation has any role in improving performance of housing projects	64	36
Full commitment of private sector would help reduce risk in the housings construction projects	72	28
Participatory approach to planning would help reduce risk in the housings construction projects	87	13
Do you think that lack of legal and regulatory framework is a in the housings construction projects	65	35
Do you think that fear of losses on such big investments is a in the housings construction projects	49	51

Table 5 indicates that 67% of the study respondents stated that they believed that there are risks in implementing PPPs of housings construction projects while 33% did not believe so. Majority (64%) of the respondents stated that risk mitigation has a role in improving performance of housing projects unlike 36% of the respondents. Majority (72%) thought that full commitment of private sector would help reduce risk in the housings construction projects while 28% did not have the same opinion. Also 87% felt that that participatory approach to planning would help reduce risk in the housings construction projects unlike 13% of the respondents. Majority (65%) of the respondents were of the opinion that lack of legal and regulatory framework is a in the housings construction projects. The table also indicates that 51% of the respondents felt that fear of losses on such big investments is not a risk in the housings construction projects while 49% felt that it is a risk

Table 6 Correlation between risk mitigation and performance of housing projects

		Housing projects performance	Risk mitigation
Housing projects performance	Pearson Correlation	1	
	Sig. (2-tailed)		
	N	103	
Risk mitigation	Pearson Correlation	.736**	1
	Sig. (2-tailed)	.000	
	N	103	103

** . Correlation is significant at the 0.01 level (2-tailed).

Table 6 indicates that there is a positive and significant relationship between risk mitigation and performance of housing projects (.736^{**}, $p < 0.01$). This implies that the more risk is mitigated the more the improvement in performance of housing construction projects

7.7. Reasons for challenges faced in housing construction projects

Table 7 indicates that 33% of the study respondents felt that rapid growth of the population is the cause of the challenges facing the construction projects within Kigali. Majority of the respondents (65%) however felt that the lack of investors in the housing industry is the source challenges while 2% stated that the challenges were as a result of lack of housing cooperatives.

Table 7 Reasons challenges faced in housing construction projects

Reason	Frequency	Percent
Rapid population growth	34	33
Lack of investors in housing industry	67	65
Lack of housing cooperatives	2	2

7.8. Reason for private sector not willing to be involved in implementation of PPPs in Housing construction projects.

Table 8 shows that 13% of the study respondents felt that lack of incentives was the reason for private sector unwillingness to be involved in implementation of PPPs in Housing construction projects. Lack of legal and regulatory framework was considered to be the reason for the same by 39% of the respondents. While 40% felt that fear of losses on such big investments was the reason for the unwillingness for private sector to be involved, 8% felt that little knowledge on the PPPs dynamics was the reason.

Table 8: Reason for private sector unwillingness to be involved in implementation of PPPS

	Frequency	Percent
Lack of incentives	13	13
Lack of legal and regulatory framework	40	39
Fear of losses on such big investments	41	40
Little knowledge on the PPPs dynamics	9	8

8. Conclusions and Recommendations

8.1. Conclusions

The study concluded that construction and technical professions are dominated by male. The sector is dominated by university graduates with the largest percentage aged between 21-35 years.

8.1.1 To determine how technical skills of private sector involvement influence the quality of housing construction projects.

Technical skills has a significant strong and positive relationship with private partnership performance (.701^{**}, $p < 0.001$). Increasing the level of technical skills will lead to increased performance of public private partnership in housing construction projects. Private sector technical skills were highly required for quality housing projects. Technical skills were necessary for better performance of housing projects.

8.1.2 To establish the role of financial contribution of private sector on performance of housing construction projects

Financial contribution has a significant strong and positive relationship with private partnership performance (.686^{**}, $p < 0.001$). Increasing the level of financial contribution will lead to increased performance of public private partnership in housing construction projects. Private sector offered financial contribution to the performance of PPPs in housing construction projects. Financial contribution made by the private sector helped to improve PPP performance in housing projects.

8.1.3 To determine the role of private sector in risks mitigation

Private sector risks mitigation has a significant strong and positive relationship with public private partnership performance (.736^{**}, $p < 0.001$). Increasing the level of Private sector risks mitigation will lead to increased performance of public private partnership in housing construction projects. Risk mitigation has a role in improving performance of housing projects. Risks associated with implementation of PPPs of housing construction projects could be mitigated through full commitment of the private sector and by adopting a participatory approach to planning.

8.2. Recommendations

The study recommends that in line with the Government commitment to women empowerment, the community leaders should encourage women to take up technical courses at school and also to perceive construction jobs just like any other jobs and not as jobs for men only. Housing and construction industries should be committed to improving the skills of the employees through on-job or off-job trainings in order to increase their performance.

Further to that the Government should put in place measures and policies that would attract housing companies to invest in Rwanda so that the current gap that is existing in housing sector as a result of rapid growth of population more so within the city may be addressed. The private sector should also be encouraged to fully commit itself to PPP in order to improve the performance more so within the housing projects.

The government should create a guarantee fund for infrastructure projects to supply with enough guarantees to mitigate some risks such as economic risk during the lifetime of the project.

8.3. Suggested areas for further study

The study suggests the following areas for further study;

- i. The study recommends that further research should be done on the policy measures that can be strategically developed in order to enhance the success of public-private partnership.
- ii. Further study should look at how to mitigate the challenges that partners encounter in the Public-Private-Partnerships. By so doing, it will encourage and ensure success of future public private partnerships not only in the housing sector but all sectors of the economy.
- iii. The study further recommends a study that will investigate factors that influence the performance of Public-Private-Partnerships in Rwanda and the challenges facing Public-Private-Partnerships in Rwanda for the purposes of benchmarking hence allow for generalization of the findings on Public-Private-Partnerships in Rwanda. With a wider coverage study, it would be easy to generalize the findings to all sectors in the economy.

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